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EXAMINER

NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

12

Office Action Summary	Application N . 09/545,367	Applicant(s) PIECHNICK, JOHN	
	Examiner TUYEN T NGUYEN	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 9 and 15-16 are rejected under 35 U.S.C. 103(a) as being obvious by Eng, Jr. et al. [US 4,857,878] in view of Carbone et al. [EPO 0 933 789 A2].

Eng, Jr. et al. discloses a transformer [figures 1-2] comprising a bobbin structure [100] with primary and secondary windings wound thereabout, said the bobbin structure comprising:

- a first bobbin member [200] including a first body portion defining a first hollow region, axially spaced walls [302, 226, 224] extending radially away from the first body portion, and a tubular portion [205] extending away from the first body portion; and

- a second bobbin member [202] including a second body portion defining a second hollow region, the second body portion comprising two sections [see figure 3] at the periphery of the second hollow region forming a recess separate from the second hollow region, the recess shaped such that the tubular portion is positioned therewithin for joining the first and second bobbin members, axially spaced walls [212, 210] extending radially away from the second body portion, and a flange/lip [210b, figures 1-2] on one of the axially spaced walls of the second

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bobbin member and extending away from another of the axially spaced walls of the second bobbin member; and

wherein the first bobbin member is disposed adjacent to the second bobbin member and is partially enclosed by the flange/lip, the primary and secondary windings respectively wound about the first and second body portions, and wherein the first and second hollow regions are shaped to receive a core structure [102, 103] inserted therewithin.

Eng, Jr. et al. discloses the instant claimed invention except for a specific recess structure.

Carbone et al. discloses a bobbin structure for a planar transformer comprising:

- a first bobbin [1] including a rectangular tubular hollow structure [7] and a recess structure formed therewithin [figure 2]; and

- a second bobbin [2] including a rectangular hollow tubular structure [8].

wherein the hollow tubular structure of the second bobbin being inserted into the recess structure of the first bobbin.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the recess design of Carbone et al. in Eng, Jr. et al. for the purpose of joining the bobbin structures together and providing air path for the device.

3. Claims 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng, Jr. et al. in view of Carbone et al., as applied to claims 1 and 15-16 above, and further in view of Tobben et al. [US 4,596,974].

Eng, Jr. et al. in view of Carbone et al. discloses the instant claimed invention except for the flanges/lips being *substantially* perpendicular to each other.

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Tobben et al. discloses a transformer [figures 1 and 3] comprising a bobbin structure with primary and secondary windings wound thereabout, said the bobbin structure comprising:

- a first bobbin member [1] including a first body portion defining a first hollow region, axially spaced walls [9, 11] extending radially away from the first body portion;
- a second bobbin member [3] including a second body portion defining a second hollow region, axially spaced walls [21, 23] extending radially away from the second body portion, and a flanges [31, 33, 35] on one of the axially spaced walls of the second bobbin member and extending away from another of the axially spaced walls of the second bobbin member; and
- a plurality of terminal pins [29].

wherein the primary and secondary windings respectively wound about the first and second body portions.

wherein the first and second hollow regions are shaped to receive a core structure [47] inserted therewithin.

wherein the flanges being substantially perpendicular to each other.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the flange design of Tobben et al. in the bobbin structure of Eng, Jr. et al., as modified, for the purpose of providing a creepage distance for the device.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eng, Jr. et al. in view of Carbone et al., as applied to claim 1 above, and further in view of Dobberstein [US 4,549,130].

Eng, Jr. et al. discloses the instant claimed invention except for a *substantially planar conductive shield* disposed between the first and second bobbin members.

Dobberstein discloses a transformer including a bobbin structure, primary and secondary windings and a conductive shield member [123].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include a conductive shield member design of Dobberstein in Eng, Jr. et al. for the purpose of reducing interference.

The specific shape/design of the conductive shield member would have been an obvious design consideration based upon the intended applicant use.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng, Jr. et al. in view off Carbone et al. and Tobben et al., as applied to claim 2 above, and further in view of Equi et al. [US 4,939,623].

Eng, Jr. et al. in view of Tobben et al. discloses the instant claimed invention except for PCB mounting structure and its location relative to the flange/walls.

Equi et al. discloses a transformer including a PCB mounting structure [see figure 3].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include a mounting structure in the bobbin structure of Eng, Jr. et al., as modified, as suggested by Equi et al. for the purpose providing a mounting structure for the PCB.

The specific location/arrangement of the mounting structure would have been an obvious design consideration based upon the environment/application use.

6. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobben et al. in view of Equi et al.

Tobben et al. discloses the instant claimed invention except for a PCB mounting structure and its location relative to the flange/walls.

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Equi et al. discloses a transformer including a PCB mounting structure [see figure 3].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include a mounting structure in the bobbin structure of Eng, Jr. et al., as modified, as suggested by Equi et al. for the purpose providing a mounting structure for the PCB.

Allowable Subject Matter

7. Claim 17 is allowed.

8. The following is an examiner's statement of reasons for allowance:

The prior art of record do not teach or suggest, in the claimed combination thereof, a transformer comprising first and second structures adapted to receive first and second printed circuit boards so that the first printed circuit board disposed parallel to the walls of the first bobbin member and perpendicular to the common axis and the second printed circuit board disposed parallel to the walls of the second bobbin member and perpendicular to the common axis, wherein the first and second structures are offset such that the first PCB and the second PCB are on different planes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments filed 04-08-04 have been fully considered but they are not persuasive.

Applicant argues.

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[1]: There is no suggestion to combine Carbone et al. with Eng, Jr. et al.;

[2]: Examiner used impermissible hindsight to form the combination;

[3]: The hollow regions formed by structures 7 and 8 in Carbone et al. are not shaped to receive a core inserted therewithin;

[4]: The structures of 7 and 8 of Carbone et al. do not increase the creepage distance between the windings, as claimed;

[5]: Tobben et al. is non-analogous to the claimed invention; and

[6]: Equi does not suggest the pcb structure claimed.

Examiner disagrees:

Regarding [1]: In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Eng, Jr. et al. and Carbone et al. disclose transformer structure using multiple bobbins. One skilled in the art would have been motivated to seek teachings and suggestions from similar transformer designs.

Regarding [2]: In response to applicant's arguments that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of

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ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding [3]: Both Eng Jr. et al. and Carbone et al. show hollow portions to receive a core member. Applicant merely claims that the core is “inserted therewithin.” Both Eng Jr. et al. and Carbone et al. show a core being received within the hollow portions.

Regarding [4]: Applicant has not claimed any specific structure other than that shown by Carbone et al. to increase creepage distance. Applicant merely claims “a recess shaped such that said tubular region is positioned therewithin for joining the first and second bobbin members.” Carbone et al. shows the claimed structure in figure 2.

Regarding [5]: In response to applicant's argument that Tobben et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Both applicant and Tobben et al. disclose a transformer mounted on a bobbin structure.

Regarding [6]: Equi discloses the use of a support for the circuit board. A skilled artisan would have been motivated to use a support for the circuit boards of Eng, Jr. et al., as modified, to provide mounting for the board.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jaylen Nguyen